

REMARKS

Claims 1-3, 5, 7-12, 18-22, 26-36 are pending in the application. Claims 28-33 were withdrawn from consideration, as drawn to a non-elected invention. Claims 1, 8, 18-22, 26, 27 and 34-36 were rejected. Claims 2, 3, 5, 7 and 9-12 were objected to. The specification, as previously amended, was objected to as containing new matter. Applicants thank the Examiner for the interview granted to their attorney.

The disclosure at pages 11 and 12 has been amended to reinsert the formula previously deleted in the last Amendment. It is believed that the amended definitions of the R groups in the reinserted formula now correspond with the formulas on page 12 and Figure 1 that show that the SOG is produced from an alkyl trialkoxysilane, an alkyl dialkoxysilane or a dialkyl dialkoxysilane. The description on page 12 now does not conflict with the description of the R groups on page 11.

Claims 8, 18 and 35 have been amended to conform to the disclosure and to make the claim language consistent with the language in the disclosure. These claims now are limited to the inclusion of a phosphor dopant that consists essentially of a YAG base phosphor or moisture sensitive phosphor nano-particles. There is now no conflict between the amended claims and the description of the dopant on page 12 or at other portions of the disclosure.

Claims 1 and 35 have now been amended to clarify the definition of the trialkoxysilane and the dialkoxysilane, as suggested by the Examiner. With these amendments, it is believed that claims 1 and 35 now comply with 35 U.S.C. 112, second paragraph.

The Examiner previously stated that U.S. 6,984,483 discloses that silicic acid condensates can be produced by reacting diphenylsilane diol with a silane that can have the formula $R_2(SiOR')_2$ where R' is alkyl and R can be an C_{1-18} alkyl. Applicants believe that there is no suggestion or disclosure in the prior art to add a phosphor dopant that is either a

YAG base polymer or moisture sensitive phosphor nano-particles, to provide applicants' claimed sol-gel spin-on-glass material. It is respectfully submitted that the cited prior art does not support the assumption that a product produced by a similar process, without the suggestion or disclosure to add the defined phosphor dopant, would render obvious applicants' claimed product and the claimed process for producing that product.

It is well known to those skilled in the art that organic dyes or metal complexes are not necessarily phosphor dopants. One of ordinary skill in the art would know that the overwhelming majority of organic dyes and metal complexes are not the defined phosphor dopants. Applicants believe that the *KSR Inter'l Co. v. Teleflex Inc.* case requires that in order to render the claims obvious, the combination of prior art references must yield results that are predictable to one of ordinary skill in the art at the time of invention. There must be at least some suggestion in the prior art that the results would be predictable, otherwise this is merely an assumption not based on any suggestion or disclosure in the prior art. In the absence of any such suggestion in the cited prior art that either an organic dye or a metal complex is the defined phosphor dopant, applicants believe that one skilled in the art would assume that the disclosure of the addition of such a dye or metal complex is not a disclosure or suggestion of the addition of the defined phosphor dopant. Therefore, it is submitted that one of ordinary skill in the art would conclude that the prior art materials disclosed in U.S. 6,984,483 are not capable of performing the intended use and do not meet the requirements of the claims.

In addition, applicants submit that there is a manipulative difference between the claims and the cited prior art in the addition of the defined phosphor dopant, in contrast to the addition of just any dye or filler. Therefore, it is believed that there is a clear difference between the claimed process and the process of the cited prior art. In view of the foregoing, applicants' respectfully submit that the amended claims are both novel and unobvious over U.S. 6,984,483, alone or in combination with the other cited prior art.

The Examiner previously stated that U.S. 6,818,721 discloses producing a silicic acid polycondensate by reacting diphenylsilanediol with a silane having the formula $\text{RSi}(\text{OR}')_3$, where R' is alkyl and R can be alkyl, Methacryloxyalkyl or Glycidyloxyalkyl. As pointed out above, applicants have amended these claims, including independent claims 18 and 35, to require that a phosphor dopant, as defined in the claims, be added. The defined phosphor dopants are a YAG base phosphor or moisture sensitive phosphor nano-particles. Claim 35 specifies a process for producing the material of claim 18 by reacting an alkyl trialkoxysilane, alkyl dialkoxysilane or dialkyl dialkoxysilane with a silane diol, wherein the alkyl group has from 1 to 8 carbon atoms, wherein the reaction of the trialkoxysilane dialkoxysilane silane with the silane diol is carried out in the presence of a catalyst, and further comprises adding to the sol-gel spin-on glass material a phosphor dopant. The phosphor dopant must consist essentially of a YAG base phosphor or moisture sensitive phosphor nano-particles.

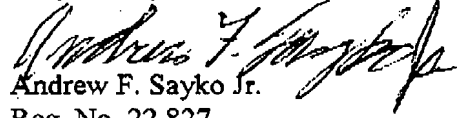
Again, it is submitted that there is no suggestion that the prior art process will provide a sol-gel spin-on-glass material that is useful in the production of devices such as waveguides. There is no suggestion or disclosure in the prior art to add the specifically defined phosphor dopant to provide applicants' claimed sol-gel spin-on-glass material. It is believed that the cited prior art does not support the assumption that a product produced by prior art process, without any suggestion or disclosure to add the defined phosphor dopant, would provide applicants' claimed product and the claimed process for producing that product. Therefore, applicants respectfully submit that the amended claims are both novel and unobvious over U.S. 6,818,721, alone or in combination with the other cited prior art.

CONCLUSIONS

Claims 1, 5 and 8 have been amended to overcome the rejections under 35 U.S.C. 112 set forth in the Office Action. Claims 2, 3, 7 and 9-12 should, therefore, no longer depend upon rejected base claims. Therefore, claims 1, 2, 3, 5, 7, 8 and 9-12 should clearly be allowable.

In view of the foregoing amendments and remarks, it is respectfully submitted that all the claims should now be in condition for allowance. An indication of the allowability of the claims, by the issuance of a Notice of Allowance, is respectfully requested. If there are any questions with regard to the present Amendment, the Examiner is requested to please contact applicants' attorney by telephone at (908) 612-0519.

Respectfully submitted,

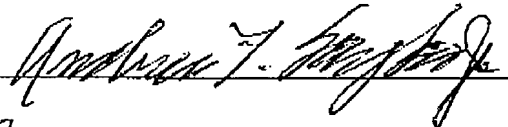

Andrew F. Sayko Jr.
Reg. No. 22,827

Andrew F. Sayko Jr.
1014 Crooked Oaks Lane
Seabrook Island, SC 29455
Tel: 908-612-0519
Fax: 843-243-0449

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Andrew F. Sayko Jr.:



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